README.TXT

ICP ICP9085LI/ICP5085BR SAS RAID Controller
ICP ICP9047MA/ICP9087MA SATA RAID Controller
ICP ICP9014RO/ICP9024RO SCSI RAID Controller
ICP ICP5805BL/ICP5045BL/ICP5085BL/ICP5125BR/ICP5165BR Unified Serial Controllers

as of September 14, 2007

Please review this file for important information about issues
and erratas that were discovered after completion of the standard
product documentation. In the case of conflict between various
parts of the documentation set, this file contains the most
current information.

NOTE: The latest BIOS and documentation can be downloaded
from www.icp-vortex.com.when they become available.

The following information is available in this file:

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1. Software and Documentation

1.1. Controller & Utility Software

Note: The latest versions of BIOS and driver software
can be downloaded from www.icp-vortex.com when they become
available.

- BIOS

- ACU

- Windows Drivers

  o Windows 2000 Server, Advanced Server, Professional
  o Windows 2003 Server, Enterprise, Standard, and Web Edition
  o Windows XP Professional
  o Windows Vista - All versions

- Linux Drivers

  o Red Hat Enterprise 4.0, IA-32 and x64
  o Red Hat Enterprise 5.0, IA-32 and x64
  o SuSE Linux Enterprise Server 9.0, IA-32 and x64
  o SuSE Linux Enterprise Server 10.0, IA-32 and x64

- FreeBSD Drivers

  o FreeBSD 5.3, 5.4 (ARCCONF 32-bit only)
  o FreeBSD 6.1 (ARCCONF 32/64-bit only)

- SCO Drivers

  o OpenServer 6.0
  o UnixWare 7.1.4

- VMware Drivers

  o VMware ESX Server 3.0.1

- Sun Solaris Drivers

  o Solaris 10 Update 1

1.2. Documentation on this CD

- ICP SAS, SATA, and SCSI RAID Controllers Installation
  and User's Guide

- ICP SAS, SATA, and SCSI RAID Controllers
  README.TXT file

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2. Installation Instructions

- The ICP SAS, SATA, and SCSI RAID Controllers Installation
  and User's Guide contains complete installation information for
  the controllers and drivers, as well as complete instructions
  for all utilities. The ICP Storage Manager User's Guide

contains complete installation information for the ICP Storage Manager software.

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3. General Cautions

- While an array is being built or cleared, DO NOT remove and reinsert any drive from that array. Doing so may cause unpredictable results for any of the controller's arrays.

- While a drive is being cleared, DO NOT try to include it in a new array. Doing so may cause unpredictable results.

- DO NOT move drives containing an array or volume from one controller to another while the power is on. Doing so could cause the loss of the array configuration or data, or both. Instead, power off both affected controllers, move the drives, and then restart.

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4. Known Limitations

4.1 Booting to a bootable CD

A system cannot boot to a bootable CD in a SCSI optical drive, such as CD or DVD drive, connected to the ICP9024RO SCSI RAID controller.

4.2 ICP9014RO/ICP9024RO controllers

Use only the utilities/flash tools included with this release. Upgrade any existing tools to those included with this release, as this release supports additional features that were not available with previous releases

4.3 ICP9024RO controller

With an Intel Pro/1000 MT 32-bit PCI NIC on the system, after controller POST the controller goes to a BLED 0xEF NMI_HANDLER_FAILURE.

4.4 ICP9085LI controller

When the controller is connected to an external enclosure, only the internal SAS connector closest to the bracket is available for use with internal SAS or SATA disk drives. The other internal SAS connector shares the SAS bus with the external connector, which is occupied.

Various devices on the serial bus can negotiate at different speeds. To determine the speed at which a particular device is negotiating, view the device properties in ICP Storage Manager. (Click on the device, then click the Properties button.)

4.5 Using the controller in a Dell Precision 530

When using the controller in a Dell Precision 530 with Diskercise and Diskstress, data corruption/miscompares may occur.

4.6 ACU utility

On some Intel and IBM systems, when you try to run the ACU, this message appears:
“Not enough free memory to load the utility!
Press any key to attempt loading the utility forcibly
OR Wait for the system initialization to be completed
[Default]”
This is normal. On Intel systems, wait for the system initialization to be completed. Then the ACU will run. On IBM systems, press any key when prompted to load the utility forcibly.

The ACU /C0 buildall command does not start a build/verify on RAID 1 or RAID 10 arrays that are being created using the quick init method.

4.7 FreeBSD

ICP Storage Manager is not supported in FreeBSD; storage management must be done through the ICP Configuration Utility (ACU) and ARCCONF command line utility.

4.8 ICP Storage Manager

After a rebuild and waking up from hibernation, a controller may be detected incorrectly in ICP Storage Manager.
Press F5 to correct the problem.

4.9 ICP5085BR/ICP ICP5805BL/ICP5045BL/ICP5085BL/ICP5125BR/ICP5165BR controllers

When the controller is installed in PCI-E slot 2 of a Dell PE 1800 system, there is no BIOS POST.

When the controller is installed in PCI-E slot 3 in a Dell PE 1800 system, the system halts and the keyboard locks up.

When the controller is set to boot from a RAID array and a second RAID array is created, the controller may no longer be able to find the boot drive.

When the controller is installed in the primary PCIe slot of an Intel 955X or nVidia nForce4 (Intel edition) motherboard, if you use the Adaptec Flash Utility to perform a Mode0 flash, the controller will show incorrectly and cannot be flashed. If a Mode0 flash is required, install the controller in an alternate PCIe slot or alternate computer.

4.10 OpenServer 6.0

Arrays may not be displayed correctly, even after you restart your computer.

To resolve the problem:

As root, run 'resmgr -r -m vtoc' until it fails. Then, as root, run '/etc/conf/bin/idconfupdate -f'. Then, reboot.

4.11 SAS and SATA controllers and Adaptec 335SAS enclosure

When the Adaptec 335SAS enclosure is attached to an ICP SAS controller, such as ICP9085LI or ICP5085BR, the enclosure numbering nomenclature starts with "0". For example, if two Adaptec 335SAS enclosures are connected to an ICP9085LI SAS controller, management tools such as Storage Manager will denote the enclosures as "Enclosure 0" and "Enclosure 1". When the Adaptec 335SAS enclosure is attached to an Adaptec SATA controller, such as ICP9047MA or ICP9087MA, the enclosure numbering nomenclature starts with "14". For example, if two Adaptec 335SAS enclosures are connected to an ICP9087MA controller, management tools such as Storage Manager will denote the enclosures as "Enclosure 14" and "Enclosure 15".

4.12 Using the ICP5085BR in a Gateway 920

When more than one ICP5085BR controllers are installed in a Gateway 920 server, the system will not POST.

4.13 Creating an Array from the ICP Storage Manager CD

When you create an array with the ICP Storage Manager bootable CD, the maximum size of the array is 2 TB.

4.14 Using the controller with an Adaptec S50 JBOD Enclosure

Temperature warnings from Adaptec S50 JBOD Enclosure (firmware version T016) are not shown in Adaptec Storage Manager (or on the enclosure).

4.15 SMART errors on SATA controllers

During POST, SMART errors for disk drives connected to SATA controllers are indicated as follows:

- N = No SMART errors reported
- Y = SMART errors reported
- N/A = Disk drive does not support SMART error reports

4.16 Firmware upgrades

Check your controller BIOS settings after upgrading the controller firmware/BIOS, as the BIOS may have been reset to its default settings during the upgrade.

4.17 RAID 10/50/60 array leg limitations

A RAID 10, RAID 50, or RAID 60 array cannot have more than 32 legs when created using the Build method. Maximum disk drive count is only limited by RAID level. For instance, a RAID 10 array built with 32 RAID 1 legs (64 disk drives) is supported; a RAID 5 array built with 32 RAID 5 legs (96 disk drives) is also supported. Although you can create a RAID 10 array with more than 64 drives using the Quick Init method, the maximum number of build/verify operations that can happen at any one time is 32; therefore, such an array could not be verified.

4.18 Microsoft VDS Storage Manager LUN Error

On some systems when creating a new LUN, the Microsoft VDS Storage Manager for SANs snap-in may not work properly and crash with an MMC snap-in error.

4.19 ICP5085BR controller

On Intel 945X or 955X motherboards with Mode0 set, the controller is not recognized when installed in the primary 16x PCIe slot.

4.20 UnixWare and OpenServer

Adding or moving controllers in an existing UnixWare or OpenServer system may cause some device resources to change, which may lead to the operating system being unable to boot. Currently, there is no workaround available in the operating system. Before installing the operating system, make sure all PCI devices are either enabled or installed.

The individual behavior and affected devices will vary from system to system. This is due to the different ways in which motherboards may handle their PCI bus layouts, and how those layouts could be changed when installing or rearranging devices. If the bus layout changes and affects a critical system device (video, boot controller, etc.) then the operating system may be unable to recover from that change and be non-bootable.

4.21 SATA disks do not support Dual Path with Expanders

Connect Dual Path SAS Enclosures with 2 Expanders only via one Expander when using SATA disks, SATA disks do not support Dual Path. If SATA disks are connected using 2 Expanders the controller BIOS may crash.

4.22 Usage of firmware, utilities and flash tools

Use only the utilities/flash tools included with this release. Upgrade any existing tools to those included with this release, as this release may support additional features that were not available with previous releases.

4.23 DOS OS not supported

The DOS environment is supported for Adaptec tool execution only (AFU.EXE and ACU.EXE).

4.24 DAT drive restoration fails when spanning tapes

When restoring from two or more tapes with a Sony SDX-470, Sony SDX-570, or Quantum DLT V4 DAT drive, the operation aborts automatically when restoring the second tape but gives the (erroneous) message "Restore Operation has Completed".

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